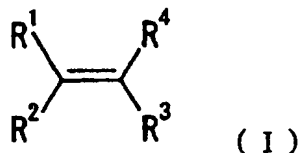


WHAT IS CLAIMED IS:

1. A multicomponent oxidation catalyst comprising a tungsten compound, a quaternary ammonium salt, any of phosphoric acids and/or boric acids, and a hydrogen sulfate salt.
2. The multicomponent oxidation catalyst according to claim 1, wherein said catalyst is used for producing an epoxy compound by oxidizing any of olefins with hydrogen peroxide.
3. The multicomponent oxidation catalyst according to claim 2, wherein said olefins are represented by the general formula (I):

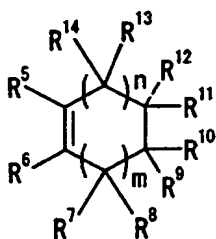
[Formula 7]



- (wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> each represent independently a hydrogen atom, alkyl group which may have substituent(s), aryl group which may have substituent(s), alkenyl group which has one or more non-conjugated carbon - carbon double bond and may have substituent(s), alkoxy group which may have substituent(s), acyl group which may have substituent(s), alkoxycarbonyl group which may have substituent(s), heterocyclic group, or carboxyl group or salt thereof);

or the general formula (II):

[Formula 8]



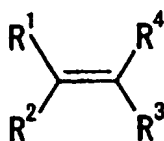
(II)

(wherein  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$  and  $R^{14}$  each represent independently a hydrogen atom, alkyl group which may have substituent(s), aryl group which may have substituent(s), alkenyl group which has one or more non-conjugated carbon - carbon double bond and may have substituent(s), alkoxy group which may have substituent(s), acyl group which may have substituent(s), alkoxycarbonyl group which may have substituent(s), heterocyclic group, or carboxyl group or salt thereof. Further, any two or more groups of these  $R^5$  to  $R^{14}$  may form a ring together with carbon atoms to which they link; m and n each represent independently an integer of 0 to 4 with a proviso that both of m and n are not 0 at the same time).

4. A process for producing an epoxy compound, characterized in that any of olefins is oxidized with hydrogen peroxide in the presence of the multicomponent oxidation catalyst according to claim 1.

5. The process for producing an epoxy compound according to claim 4, wherein said olefins are represented by the general formula (I):

[Formula 9]

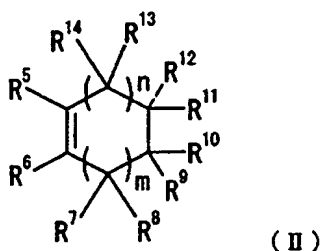


(I)

(wherein  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  each represent independently a hydrogen atom, alkyl group which may have substituent(s), aryl group which may have substituent(s), alkenyl group which has one or more non-conjugated carbon - carbon double bond and may have substituent(s), alkoxy group which may have substituent(s), acyl group which may have substituent(s), alkoxycarbonyl group which may have substituent(s), heterocyclic group, or carboxyl group or salt thereof);

or the general formula (II):

[Formula 10]



(wherein  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$  and  $R^{14}$  each represent independently a hydrogen atom, alkyl group which may have substituent(s), aryl group which may have substituent(s), alkenyl group which has one or more non-conjugated carbon - carbon double bond and may have substituent(s), alkoxy group which may have substituent(s), acyl group which may have substituent(s), alkoxycarbonyl group which may have substituent(s), heterocyclic group, or carboxyl group or salt thereof. Further, any two or more groups of these  $R^5$  to  $R^{14}$  may form a ring together with carbon atoms to which they link;  $m$  and  $n$  each represent independently an integer of 0 to 4 with a proviso that both of  $m$  and  $n$  are not 0 at the same time).